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Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER	
ISOM, JOHN W	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/553,380	BUESGEN ET AL.	
	Examiner	Art Unit	
	John Isom	2447	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 August 2009 and 10 June 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *21-27,31-33 and 38-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *21-27,31-33 and 38-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. In the Request for Continued Examination received 08/04/2009 (the "RCE"), Applicant indicates the request for reconsideration received 06/10/2009 (the "request") as being the submission required in the RCE.

Claims 21-27, 31-33 and 38-42 are pending.

Response to Arguments

2. Applicant's arguments in the request, with regard to the rejection of claims 21-27, 33, 38 and 40-42 under 35 U.S.C. 102(b) as being anticipated by Allon et al. (US Pat. No. 5539883) (or "Allon"), have been fully considered but they are not persuasive.

In the request, Applicant argues that the instant rejection is in error, for one or more of at least the following reasons:

(A) Allon does not disclose "replacing the drive device with a replacement drive device" as in claim 21 (Remarks at page 2, last ¶);

(B) Allon does not disclose "providing a second device with data memory or storage in which a relationship or order of the drive device with respect to at least the second device is stored" as in claim 21 (page 3, 1st ¶);

(C) Allon does not disclose "operating the replacement drive device to identify a first of the nodes to which it is assigned and to identify other devices" as in claim 21 (page 3, 2nd ¶);

(D) Allon does not disclose "[i]n an reconfigurable network comprising a plurality of devices, a method for identifying an order of devices in the network thereby enabling

determination of relative spatial arrangements among the devices" as in claim 41 (page 3, 3rd ¶); and

(E) Allon does not disclose "a first of the devices . . . determining the number of connections of the first node, the first hierarchical arrangement of the connections and nodes, and the connection with which the device is connected to the first node" as in claim 41 (page 4, 2nd ¶).

In response, the examiner respectfully traverses, and offers the following evidence and argument in support of the traversal:

The examiner argues that the instant rejection is not in error, because

(A) Allon teaches "replacing the drive device with a replacement drive device" as in claim 21;

(B) Allon teaches "providing a second device with data memory or storage in which a relationship or order of the drive device with respect to at least the second device is stored" as in claim 21;

(C) Allon teaches "operating the replacement drive device to identify a first of the nodes to which it is assigned and to identify other devices" as in claim 21;

(D) the language in the preamble of claim 41 does not limit the claim, and Allon discloses the subject matter of that language; and

(E) Allon teaches "a first of the devices . . . determining the number of connections of the first node, the first hierarchical arrangement of the connections and

nodes, and the connection with which the device is connected to the first node" as in claim 41.

Each of these reasons is individually considered under a corresponding header as follows.

(A) Allon teaches "replacing the drive device with a replacement drive device" as in claim 21

Applicant argues that a computer is not a drive device (page 3, 1st ¶).

Allon discloses computers in a network logically linked in a hierarchical tree structure (column 4, lines 16-31); a computer comprising a means for storing information (column 6, lines 14-28); and "[a] computer program product, for use with a computer, comprising: a recording medium" (column 16, lines 46-48). A "drive" is "[a] device that reads data from and often writes data onto a storage medium" (see excerpt from "Drive Definition", *The American Heritage® Dictionary of the English Language, 4th ed.*, Houghton Mifflin Company, 2004, accessed 08 Oct 2009 at <http://dictionary.reference.com/browse/drive>). Because a computer reads data from and often writes data onto a storage medium, a computer can be construed to be a drive. Because a computer is also a device, a computer can be construed to be a drive device. Further, because a node is a computer, a node can be construed to be a drive device. Thus, Allon teaches a drive device.

Allon further discloses that, in the hierarchical tree structure, a dead node is detected, and a new node is added, because nodes fail (column 8, lines 34-39). This

disclosure implies that a new node may be added to replace a dead node which has failed. Thus, Allon teaches replacing a dead node with a new node. Because the *dead node* teaches "the drive device", and the *new node* teaches "a replacement drive device", Allon teaches "replacing the drive device with a replacement drive device" as in claim 21.

(B) Allon teaches "providing a second device with data memory or storage in which a relationship or order of the drive device with respect to at least the second device is stored" as in claim 21

Allon discloses that information stored in each computer contains a number of entries, each entry containing information regarding the number of links in the tree separating a particular computer from the computer in which the information is stored, and the rank of the particular computer, logically linked to the computer in which the information is stored, from which the entry was last received (column 5, lines 22-32). In this disclosure, the *computers* teach "a second device and the drive device". The *means for storing information* and the *recording medium*, teach "data memory or storage". The *information regarding the number of links in the tree separating a particular computer from the computer in which the information is stored, and the rank of the particular computer, logically linked to the computer in which the information is stored, from which the entry was last received*, teaches "a relationship or order of the drive device with respect to at least the second device". Thus, Allon teaches "providing

a second device with data memory or storage in which a relationship or order of the drive device with respect to at least the second device is stored" as in claim 21.

(C) Allon teaches "operating the replacement drive device to identify a first of the nodes to which it is assigned and to identify other devices" as in claim 21

Allon discloses that when a computer is added to the network, the computer looks for a parent computer (column 8, lines 54-55; column 7, lines 1-6). Allon further discloses that each node receives information from the nodes to which it is linked in the tree structure, and that information on nodes in another sub-tree can reach any node (column 10, lines 25-34).

In this disclosure, *the added computer* teaches "a replacement drive device". The *network* teaches "the nodes to which it is assigned". The disclosure that *the computer looks for a parent computer*, teaches "to identify a first of the nodes to which it is assigned". The facts that each node *receives information from the nodes to which it is linked*, and that *information on nodes in another sub-tree can reach any node*, imply "to identify other devices including the second device".

Thus, Allon teaches "operating the replacement drive device to identify a first of the nodes to which it is assigned and to identify other devices" as in claim 21.

(D) the language in the preamble of claim 41 is not given patentable weight, and Allon discloses the subject matter of that language

The recitations "In an reconfigurable network comprising a plurality of devices" and "identifying an order of devices in the network thereby enabling determination of relative spatial arrangements among the devices", have not been given patentable weight because the recitations occur in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). In this case, the body of the claim does not depend on the preamble for completeness but, instead, the process steps are able to stand alone. Furthermore, the language "identifying an order of devices in the network thereby enabling determination of relative spatial arrangements among the devices" merely recites the purpose of the recited process. Thus, the language in the preamble of claim 41 is not given patentable weight.

Nonetheless, Allon does disclose the subject matter of the language at issue. Specifically, Allon discloses computers in a network logically linked in a hierarchical tree structure (column 4, lines 16-31). Allon further discloses that for each of the computers, a link to a computer of lower rank is a link to a parent which is higher up in the tree, and a link to each of computers of higher rank is a link to a child which is lower down in the tree (column 7, lines 1-6; column 4, lines 16-31). In this disclosure, the *computers in a*

network logically linked in a hierarchical tree structure, disclose "an reconfigurable network comprising a plurality of devices". The *computers*, disclose "the devices". The *link to a parent*, discloses a "relationship among the nodes". The facts that the link to the parent is *higher up in the tree*, and the link to a child is *lower down in the tree*, disclose "identifying an order of devices in the network thereby enabling determination of relative spatial arrangements among the devices". Thus, Allon discloses the subject matter of the language at issue.

(E) Allon teaches "a first of the devices . . . determining the number of connections of the first node, the first hierarchical arrangement of the connections and nodes, and the connection with which the device is connected to the first node" as in claim 41

Allon discloses that when a computer is added to the network, the computer looks for a parent computer (column 8, lines 54-55; column 7, lines 1-6). Allon further discloses that information stored in each computer contains a number of entries, each entry containing information regarding the number of links in the tree separating a particular computer from the computer in which the information is stored (column 5, lines 22-32). Allon further discloses that this node receives information from other nodes through the parent (column 10, lines 25-34). Allon further discloses that this node stores the rank of each of the other nodes linked to this node (column 5, lines 22-32).

In this disclosure, the *added computer* and the *node*, teach "a first of the devices". *The parent*, teaches "the first node". The fact that this node stores the number of links to each of the other nodes, enables this node to ascertain that: the number of connections of its parent is equal to the number of nodes, from which this node receives information through the parent, and for which the number of links to this node is 2. The fact that this node *stores the rank of each of the other nodes linked to this node*, teaches "determining . . . the first hierarchical arrangement of the connections and nodes, and the connection with which the device is connected to the first node".

Thus, Allon teaches "a first of the devices . . . determining the number of connections of the first node, the first hierarchical arrangement of the connections and nodes, and the connection with which the device is connected to the first node" as in claim 41.

Conclusion

Because—

(A) Allon teaches "replacing the drive device with a replacement drive device" as in claim 21;

(B) Allon teaches "providing a second device with data memory or storage in which a relationship or order of the drive device with respect to at least the second device is stored" as in claim 21;

(C) Allon teaches "operating the replacement drive device to identify a first of the nodes to which it is assigned and to identify other devices" as in claim 21;

(D) the language in the preamble of claim 41 does not limit the claim, and Allon discloses the subject matter of that language; and

(E) Allon teaches "a first of the devices . . . determining the number of connections of the first node, the first hierarchical arrangement of the connections and nodes, and the connection with which the device is connected to the first node" as in claim 41

—the examiner concludes that the instant rejection is not in error. Accordingly, the instant rejection is continued.

Specification

3. The disclosure is objected to because of the following informalities:

- In the last 2 lines of [0018], please amend as follows: "such as flashes."
- In the 13th line of [0021], please amend as follows: "[[P2S2]] P2S3".
- In the 14th line of [0021], please amend as follows: "[[P2S3]] P4S3".
- In the 14th and 15th lines of [0021], the reference number "1" of "database 1" is not shown in Figure 1.
- In the 46th line of [0022], please amend as follows: "[[S1]] Sn".
- In the 12th line of [0023], please amend as follows: "[[TS]] T3".

Appropriate correction is required.

Claim Objections

4. Claims 21, 23, 25, 27, 31 and 38-42 are objected to because of the following informalities:

- In the 8th line of claim 21, the examiner suggests amending "a first of the nodes" to "a first node of the nodes", in order to clarify the antecedent basis of every occurrence of "the first node" in the claim.
- In the 8th and 9th lines of claim 21, the limitation "the nodes to which it is assigned" lacks antecedent basis in the claims.
- In the 12th line of claim 21, the term "enabling" causes the language that follows it not to limit the claim as *steps* of the method, because the term "enabling" suggests or makes optional but does not require steps to be performed. See MPEP §§ 2111.04, 2106(II)(C).
- In the 12th line of claim 21, please amend as follows: "the replacement drive device".
- In the 16th line of claim 21, please amend as follows: "the devices".
- In the 17th line of claim 21, please amend as follows: "between the devices".
- In the 19th line of claim 21, please amend as follows: "or the other nodes".
- In the 18th line of claim 21, the limitation "the determined other connections" lacks antecedent basis in the claim, because the language "to determine for the first node other connections . . ." (in the 14th-16th lines of the claim) is not a *step* limitation of the claimed method (see *supra*).

- In the 1st line of claim 23, the phrase "wherein by" causes the language that follows it not to limit the claim, because the phrase suggests or makes optional but does not require steps to be performed or does not limit the claim to a particular structure. Furthermore, the language is not given weight because it simply expresses the intended result of the process step of "establishing a relationship" which is positively recited in claim 21. See MPEP §§ 2106(II)(C), 2111.04 (citing *Hoffer v. Microsoft Corp.*, 405 F.3d 1326, 1329, 74 USPQ2d 1481, 1483 (Fed. Cir. 2005) (quoting *Minton v. Nat 'l Ass 'n of Securities Dealers, Inc.*, 336 F.3d 1373, 1381, 67 USPQ2d 1614, 1620 (Fed. Cir. 2003))).
- In the 2nd line of claim 23, it is not clear whether each of the 2 occurrences of "another device" is the same as or different than any of the "other devices" in the 9th line of claim 21.
- In the 2nd line of claim 23, please amend as follows: "as an upstream neighbor".
- In the 3rd line of claim 23, please amend as follows: "as a downstream neighbor".
- In the 2nd line of each of claims 25 and 27, it is not clear whether "a device" is the same as or different than any of "a second device" in the 5th line of claim 21, or "the drive device" in the 6th line of claim 21, or "a replacement drive device" in the 7th line of claim 21, or the "other devices" in the 9th line of claim 21.

- In the 2nd line of claim 31, please amend as follows: "and the other nodes".
- In the 2nd line of claim 31, the limitation "the MAC addresses" lacks antecedent basis in the claims.
- In the last line of each of claims 38-40, please amend as follows: "the devices."
- In the 1st line of claim 41, please amend as follows: "In a[[n]] reconfigurable".
- In the 14th line of claim 41, please amend as follows: "node, and".
- In each of the 7th and 17th lines of claim 41, the term "thereby" causes the language that follows it not to limit the claim, because the term suggests or makes optional but does not require steps to be performed or does not limit the claim to a particular structure. See MPEP §§ 2111.04, 2106(II)(C).
- In the 17th line of claim 41, the examiner suggests deleting "the first device", and amending "acquiring in accord" to "acquiring by the first device in accord".
- In the 1st line of claim 42, please amend as follows: "claim [[42]] 41 wherein".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims **21-27, 33, 38 and 40-42** are rejected under 35 U.S.C. 102(b) as being anticipated by **Allon et al.** (US Pub Pat. No. 5539883) (or "Allon").

With regard to claim **21**, Allon teaches: In an automation network comprising a plurality of devices, a method for replacing a first drive device involving identifying an order of devices in the network, wherein the network contains a number of nodes, and wherein each of the nodes has a number of connections for interconnecting the nodes and the devices, the method comprising:

providing a second device with data memory or storage in which a relationship or order of the drive device with respect to at least the second device is stored (i.e., computers in a network are logically linked in a hierarchical tree structure (column 4, lines 16-31); each of the computers (a second device and the drive device) comprises a means for storing information (column 6, lines 14-28) which may be a recording medium (data memory or storage) (column 16, lines 46-48); the information stored in each computer contains a number of entries, each entry containing information regarding the number of links in the tree separating a particular computer from the computer in which the information is stored, and the rank of the particular computer, logically linked to the computer in which the information is stored, from which the entry was last received (a relationship or order of the drive device with respect to at least the second device) (column 5, lines 22-32));

replacing the drive device with a replacement drive device (i.e., a dead node (the drive device) is detected, and a new node (a replacement drive device) is added (replacing the drive device), because nodes fail (column 8, lines 34-39));

operating the replacement drive device to identify a first of the nodes to which it is assigned (i.e., when a computer (the replacement drive device) is added to the network (the nodes to which it is assigned), the computer looks for (to identify) a parent computer (a first of the nodes to which it is assigned) (column 8, lines 54-55; column 7, lines 1-6)) and to identify other devices including the second device (i.e., each node (the replacement drive device) receives information from the nodes to which it is linked in the tree structure (which implies to identify other devices including the second device); information on nodes in another sub-tree can reach any node (column 10, lines 25-34));

operating the replacement drive device to receive information from the second device (i.e., each node (the replacement drive device) receives information from the nodes to which it is linked in the tree structure (the second device); information on nodes in another sub-tree can reach any node (column 10, lines 25-34)), enabling the drive device to ascertain the number of connections of the first node (i.e., the fact that this node stores the number of links to each of other nodes (column 5, lines 22-32), enables this node (the drive device) to ascertain that the number of connections of its parent (the first node) is equal to the number of nodes, from which this node receives information through the parent (column 10, lines 25-34), and for which the number of links to this node is 2) and a predefined hierarchy of the connections and the

connection with which the replacement drive device is connected to the first node (i.e., this node stores the rank of each of other nodes linked to this node (column 5, lines 22-32)) and to determine for the first node other connections which are connected to other nodes or devices (i.e., the fact that this node is enabled to ascertain the number of connections of its parent (*supra*), implies that this node is enabled to determine for the parent (the first node) other connections to other computers (other nodes or devices)); and

establishing a relationship between devices in the network on the basis of the connection hierarchy predefined for the first node and of the determined other connections which are connected to the devices or other nodes (i.e., each computer can form an upward link to a computer of lower rank, and can form a downward link to each of a number of computers of higher rank, to form the tree structure (column 7, lines 1-6; column 4, lines 42-47)).

With regard to claim **22**, Allon teaches: The method according to claim 21, executed by each of the devices (i.e., steps are taken by each node in the network tree to send and receive information concerning the placement of each node in the network tree, col. 6 lines 14-43).

With regard to claim **23**, Allon teaches: The method according to claim 21, wherein by the step of establishing a relationship another device is established as upstream neighbor and another device is established as downstream neighbor for each

of the devices (i.e., the network tree building process is executed by each node in the network to determine its place in the network as a downstream or upstream node, col. 7 lines 1-18).

With regard to claim **24**, Allon teaches: The method according to claim 21, wherein each step of the method is repeated periodically (i.e., the periodic distribution of the network tree information across the network, is used by each node to determine its placement in the network as well as the placement and status of all other nodes in the network, col. 4 lines 15-31, col. 5 lines 12-21 and lines 62-67).

With regard to claim **25**, Allon teaches: The method according to claim 21, wherein the recited steps are repeated whenever a device is no longer connected to the network (i.e., the network tree maintenance process takes place to recognize dead or new nodes on the network, col. 8 lines 35-59).

With regard to claim **26**, Allon teaches: The method according to claim 21, wherein the recited steps are repeated whenever a new device is connected to the network (i.e., the network tree maintenance process takes place to recognize dead or new nodes on the network, col. 8 lines 35-59).

With regard to claim **27**, Allon teaches: The method according to claim 21, wherein the recited steps are repeated whenever a device is replaced by a new device

(i.e., the network tree maintenance process takes place to recognize dead or new nodes on the network as well as replacing and rebooting a node, col. 8 lines 21-26 and 35-59).

With regard to claim **33**, Allon teaches: The method according to claim 21, wherein the method is executed by a computer program product (column 16, lines 46-48).

With regard to claim **38**, Allon teaches: The method according to claim 21, applied to an automation system containing controls, operator units, drives or actuators as devices (i.e., a computer or node operates in a network of similar devices with which it is linked, col. 6 lines 18-28).

With regard to claim **40**, Allon teaches: The method according to claim 21, wherein the network is a means of rail transport containing traction vehicles and cars as devices (i.e., in the configuration of a cluster, each computer/node is assigned a different ranking and each node connects to other nodes in the cluster and not to nodes outside the cluster, col. 12 lines 31-40).

With regard to claim **41**, Allon teaches: In an reconfigurable network comprising a plurality of devices, a method for identifying an order of devices in the network thereby enabling determination of relative spatial arrangements among the devices, wherein the

network contains a number of nodes, and wherein each of the nodes has a number of connections for interconnecting the nodes and the devices, the method comprising:

configuring the network according to a first hierarchical arrangement of the connections thereby establishing relationships among the nodes determinative of the relative spatial arrangements among the devices (i.e., computers in a network are logically linked in a hierarchical tree structure (column 4, lines 16-31); for each of the computers (the nodes and the devices), a link to a computer of lower rank is a link to a parent (relationship among the nodes) which is higher up in the tree (determinative of the relative spatial arrangement among the devices), and a link to each of computers of higher rank is a link to a child (relationship among the nodes) which is lower down in the tree (determinative of the relative spatial arrangements among the devices) (column 7, lines 1-6; column 4, lines 16-31));

a first of the devices performing a series of determinations including:

determining a first of the nodes to which it is assigned (i.e., when a computer (a first of the devices) is added to the network (the nodes to which it is assigned), the computer looks for (determines) a parent computer (a first of the nodes to which it is assigned) (column 8, lines 54-55; column 7, lines 1-6)),

determining other devices upstream or downstream from the first device (i.e., information stored in each computer contains a number of entries, each entry containing information regarding the number of links in the tree separating a particular computer from the computer in which the information is stored (column 5, lines 22-32)),

determining the number of connections of the first node (i.e., the fact that this node stores the number of links to each of other nodes (column 5, lines 22-32), enables this node (the drive device) to ascertain that the number of connections of its parent (the first node) is equal to the number of nodes, from which this node receives information through the parent (column 10, lines 25-34), and for which the number of links to this node is 2), the first hierarchical arrangement of the connections and nodes, and the connection with which the device is connected to the first node (i.e., this node stores the rank of each of other nodes linked to this node (column 5, lines 22-32)) and

determining for the first node other connections which are connected to other nodes or devices (i.e., the fact that this node is enabled to ascertain the number of connections of its parent (*supra*), implies that this node is enabled to determine for the parent (the first node) other connections to other computers (other nodes or devices)),

the first device thereby acquiring in accord with the first hierarchical arrangement relationships among nodes and connections to which other devices are connected (i.e., each computer can form an upward link to a computer of lower rank, and can form a downward link to each of a number of computers of higher rank, to form the tree structure (column 7, lines 1-6; column 4, lines 42-47)).

With regard to claim **42**, Allon teaches: The method according to claim [41], wherein the network comprises a plurality of computer devices each positioned on a

vehicle or car in a transport arrangement (i.e., in the configuration of a cluster, each computer/node is assigned a different ranking and each node connects to other nodes in the cluster and not to nodes outside the cluster, col. 12 lines 31-40).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims **31, 32 and 39** are rejected under 35 U.S.C. 103(a) as being unpatentable over Allon in view of **Liu et al.** (U.S. Pat. No. 6574664) (or "Liu").

With regard to claim **31**, Allon teaches: The method according to claim 21 (see discussion above). Allon does not teach, but Liu does teach: wherein determination of connections between the first node and other nodes is performed by the MAC addresses (i.e., a discovery procedure utilizes MAC addresses to discover nodes or devices connected to one another on a network (column 2, lines 23-34), *in order to provide IP and MAC addresses of devices on a network, to application programs* (column 2, lines 35-45). Based on Allon in view of Liu, it would have been obvious to one having ordinary skill in the art at the time the Applicant's invention was made, to combine the teaching of Liu with the claimed subject matter as taught by Allon, in order to provide IP and MAC addresses of devices on a network, to application programs.

With regard to claim **32**, Allon teaches: The method according to claim 21 (see discussion above). Allon does not teach, but Liu does teach: wherein the step of establishing a relationship includes determining IP addresses of the other devices (i.e., a local IP address procedure discovers IP addresses of devices on a local network, and stores the IP addresses (column 2, lines 23-51), *in order to perform more complex operations with devices on the network* (column 2 lines 1-12; column 1, lines 33-47)). Based on Allon in view of Liu, it would have been obvious to one having ordinary skill in the art at the time the Applicant's invention was made, to combine the teaching of Liu with the claimed subject matter as taught by Allon, in order to perform more complex operations with devices or nodes on the network.

With regard to claim **39**, Allon teaches: The method according to claim 21 (see discussion above). Allon does not teach, but Liu does teach: wherein the network is an Ethernet containing personal computers or peripherals as devices (i.e., the network can utilize any type of network topology, and preferably Ethernet (column 3, lines 33-53), *in order to have a network composed of a large number of addressable devices* (column 3, lines 54-56)). Based on Allon in view of Liu, it would have been obvious to one having ordinary skill in the art at the time the Applicant's invention was made, to combine the teaching of Liu with the claimed subject matter as taught by Allon, in order to have a network composed of a large number of addressable devices.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Isom whose telephone number is (571)270-7203. The examiner can normally be reached on Monday through Friday, 9:30 a.m. to 6:00 p.m. ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Hwang can be reached on (571)272-4036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/J. I./
Examiner, Art Unit 2447
10/8/2009

/Joon H. Hwang/
Supervisory Patent Examiner, Art Unit 2447